DOCUMENT RESUME

ED 391 922 CE 070 791

AUTHOR Darnell, Charlotte; Shaw, Ellen
TITLE Articulation--A Viable Answer to Educational Excellence.
PUB DATE Dec 95
NOTE 61p.; Paper presented at the American Vocational Association Convention (Denver, CO, December 1995).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Articulation (Education); *College School Cooperation; Community Colleges; Cooperative Planning; *Educational Objectives; Questionnaires; Records (Forms); Secondary Education; *Statewide Planning; *Tech Prep; Two Year Colleges; *Vocational Education
IDENTIFIERS *Mississippi

ABSTRACT

This document outlines Mississippi's plan for articulation of tech prep activities at the state's secondary schools and community and junior colleges. The first section is an overview of tech prep in Mississippi that includes the following: diagram depicting the organizational structure of Mississippi's secondary-postsecondary tech prep initiative; 1995-96, 1996-97, 1997-98, and 1998-99 delivery plans for tech prep sites that began implementation in 1995-96; proposed 4-year plan for professional development of practitioners involved in the tech prep initiative; map of Mississippi tech prep sites; and brochures describing Mississippi's tech prep discovery courses (for grades 7-9) and tech prep objectives. The second section contains the following materials to assist individuals in developing and delivering tech prep programs: information sheet listing the purpose, goals/objectives, and desired outcomes of articulation; table detailing the activities, individuals, funding sources, and resources involved in a four-step articulation process; sample cooperative articulation agreement, articulation summary report, advanced placement agreement, and recommended sequential course of study; and chart listing the secondary programs and articulated and related postsecondary programs of each cluster area of Mississippi's vocational-technical education program. Concluding the document are 26 general questions to be asked when planning a program for articulation. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 391 922

ARTICULATION - A VIABLE ANSWER TO EDUCATIONAL EXCELLENCE

Presented by
Charlotte Darnell
Ellen Shaw

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

C Darnell
E Shaw

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

AVA
Denver, CO
December 1995

CE 070 391

BEST COPY AVAILABLE

For more information please contact:

Ellen Shaw, Tech Prep Coordinator
East Mississippi Community College
P. O. Box 100, Mayhew, MS 39753
(601) 243-1908

Charlotte Darnell, Tech Prep Coordinator
Itawamba Community College
653 Eason Blvd., Tupelo, MS 38801
(601) 680-8430

BEST COPY AVAILABLE

Draft

November 30, 1994

Mississippi

TECH PREP

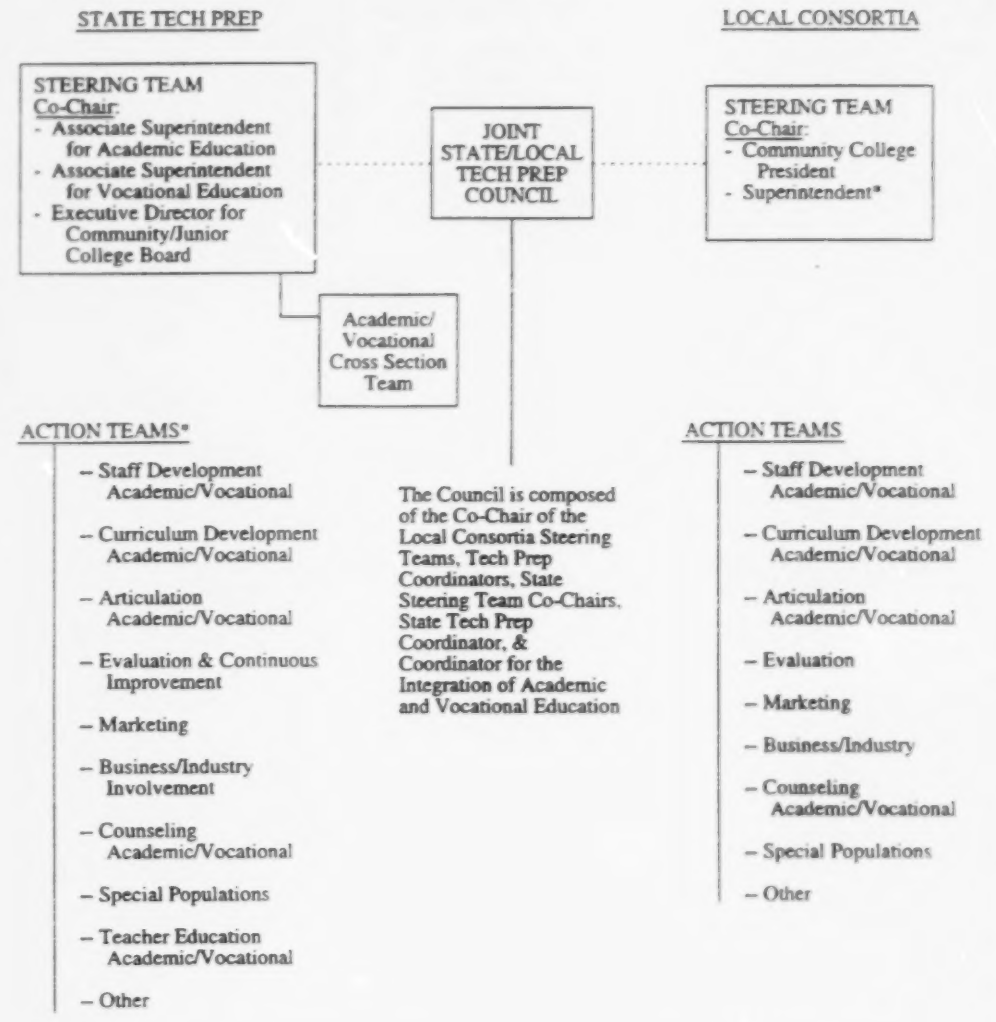
"A Path to Tomorrow"

1995-99 Plan

(For Sites Implementing Tech Prep in the 1995-96 School Year)

BEST COPY AVAILABLE

MISSISSIPPI SECONDARY - POSTSECONDARY TECH PREP INITIATIVE
Organizational Structure


STATE TECH PREP
LOCAL CONSORTIA
STEERING TEAM
Co-Chair:
- Associate Superintendent for Academic Education
- Associate Superintendent for Vocational Education
- Executive Director for Community/Junior College Board
JOINT STATE/LOCAL TECH PREP COUNCIL
STEERING TEAM
Co-Chair:
- Community College President
- Superintendent*
Academic/ Vocational Cross Section Team
ACTION TEAMS*
– Staff Development Academic/Vocational
– Curriculum Development Academic/Vocational
– Articulation Academic/Vocational
– Evaluation & Continuous Improvement
– Marketing
– Business/Industry Involvement
– Counseling Academic/Vocational
– Special Populations
– Teacher Education Academic/Vocational
– Other
The Council is composed of the Co-Chair of the Local Consortia Steering Teams, Tech Prep Coordinators, State Steering Team Co-Chairs, State Tech Prep Coordinator, & Coordinator for the Integration of Academic and Vocational Education
ACTION TEAMS
– Staff Development Academic/Vocational
– Curriculum Development Academic/Vocational
– Articulation Academic/Vocational
– Evaluation
– Marketing
– Business/Industry
– Counseling Academic/Vocational
– Special Populations
– Other

*Chairman of each Action Team is on Steering Team.

*Selected by Consortia Administrative Council.

1995-96 (Year I) Delivery Plan
For Tech Prep Sites Beginning Implementation in 1995-96

Secondary Schools (Grades 7-12)

Adopt *Goals for Increasing Academic Excellence*

- Site Development Plan completed by March 1, 1996 (Secondary Schools)

Implement applied academic instruction (contextual methodologies) in secondary Pre-Algebra/Algebra I, Biology, and English I

Implement academic and vocational teacher teams

Implement Career Centers

- Career Centers to be operational by January 1, 1996

Initiate Career/Educational Plan

- Teachers-advisors selected and trained by January 31, 1996
- All tenth grade students to complete by May 1996

Continue on-going occupational vocational programs

Create awareness of skills test(s) to be administered in Spring 1997

Develop articulation agreement by September 30, 1995

Implement secondary and community/junior college articulation teams

- Phase I - Minimum of 4 vocational-technical courses and 2 academic courses
- Phase I to be completed by December 15, 1995

Community/Junior College Freshmen and Sophomores

Implement community/junior college Tech Prep Career Centers

Implement community/junior college Experiencing Technology Centers

Implement community/junior college contextual methodologies

Implement community/junior college integration activities

Explore articulation of community/junior college academic/technical courses with Institutions of Higher Learning

1996-97 (Year II) Delivery Plan
For Tech Prep Sites That Began Implementation in 1995-96

Develop Individual Career Paths

Prepatory Courses

7th Grade
- Implement Career Discovery Course
- Develop individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

8th Grade
- Implement Computer Discovery Course
- Expand academic and vocational teacher teams to implement integration activities

9th Grade
- Implement Technology Discovery Course
- Expand use of applied academic instruction (contextual methodologies) in Pre-Algebra/Algebra I, Biology I, and English I to all sections
- Expand academic and vocational teacher teams to implement integration activities

10th Grade
- Develop individual Career/Educational Plans
- Expand use of applied academic instruction (contextual methodologies) to advanced math, science, and communications courses (Geometry, Advanced Biology/Chemistry, and English II)
- Expand academic and vocational teacher teams to implement integration activities

11th & 12th Grades
- Administer occupational skills test(s) to secondary program completers in Spring 1997
- Continue secondary occupational skill programs
- Revise individual Career/Educational Plans (11th grade)
- Continue articulation of secondary and community/junior college vocational and academic courses (Phase II- Minimum of 4 additional vocational-technical courses and 2 additional academic courses to be completed by December 15, 1996.)
- Implement Work-Based Learning programs (selected sites)
- Expand academic and vocational teacher teams to implement integration activities

2 +

Community/Junior College Freshmen and Sophomores
- Sequential development of skills continues in community/junior college courses
- Expand academic and vocational teacher teams to implement integration activities
- Community college credit can be earned by secondary students through an articulated program agreement with the community/junior college

2
- Continue community/junior college Tech Prep Career Centers
- Expand community/junior college contextual methodologies
- Continue community/junior college course articulation with Institutions of Higher Learning

1997-98 (Year III) Delivery Plan
For Tech Prep Sites That Began Implementation in 1995-96

Develop Individual Career Paths | Preparatory Courses | 2 + 2

7th Grade
- Implement/continue Career Discovery Course
- Develop individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

8th Grade
- Continue Computer Discovery Course
- Revise individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

9th Grade
- Implement/continue Technology Discovery Course
- Continue applied academic instruction (contextual methodology) courses
- Expand academic and vocational teacher teams to implement integration activities

10th Grade
- Develop individual Career/Educational Plans
- Continue and expand applied academic instruction (contextual methodology) courses
- Expand academic and vocational teacher teams to implement integration activities

11th & 12th Grades
- Expand applied academic instruction (contextual methodologies) into all math, science, and communications courses
- Continue on-going occupational skills classes
- Complete articulation of secondary and community/junior college vocational programs and academic courses (Phase III - All possible linkages to have been completed by December 15, 1997.)
- Revise individual Career/Educational Plans
- Continue Work-based Learning Programs
- Administer occupational skills test(s) to program completers in Spring 1998
- Expand academic and vocational teacher teams to implement integration activities

Community/Junior College Freshmen and Sophomores
- Sequential development of skills continues in community/junior college courses
- Expand academic and vocational teacher teams to implement integration activities
- Continue community/junior college Tech Prep Career Centers
- Expand community/junior college contextual methodologies
- Continue community/junior college course articulation with Institutions of Higher Learning

1998-99* (Year IV) Proposed Plan
For Tech Prep Sites That Began Implementation in 1995-96

Develop Individual Career Paths:

Prep

Preparatory Courses

2 + 2

7th Grade
- Continue Career Discovery Course
- Develop individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

8th Grade
- Continue Computer Discovery Course
- Revise individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

9th Grade
- Continue Technology Discovery Course
- Continue applied academic instruction (contextual methodology) courses
- Revise individual Career/Educational Plans
- Expand academic and vocational teacher teams to implement integration activities

10th Grade
- Develop individual Career/Educational Plans
- Continue applied academic instruction (contextual methodology) courses
- Expand academic and vocational teacher teams to implement integration activities

11th & 12th Grades
- Continue applied academic instruction (contextual methodologies) in all math, science, and communications courses
- Continue on-going occupational skills classes
- Revise individual Career/Educational Plans
- Continue Work-based Learning Programs
- Administer occupational skills test(s) to program completers in Spring 1999
- Expand academic and vocational teacher teams to implement integration activities

Community/Junior College Freshmen and Sophomores
- Sequential development of skills continues in community/junior college courses
- Continue academic and vocational teacher teams to implement integration activities
- Continue community/junior college Tech Prep Career Centers
- Continue community/junior college contextual methodologies
- Continue community/junior college course articulation with Institutions of Higher Learning

* All proposed activities and programs of the Mississippi Tech Prep Initiative are to be operational and on-going by the beginning of this school year.

Proposed Plan for Professional Development

1993-94

Professional development has been provided for:

- Local superintendents on the *High School That Work* concept
- Steering committees including special populations and business and industry
- Applied Biology/Chemistry instructors
- Applied Communications instructors
- Applied Mathematics instructors
- Tech Prep Coordinators on the Tech Prep Handbook, *High Schools That Work*, and *Thinking Like a Leader*
- Local administrators on the North Carolina Tech Prep Initiative
- Secondary and postsecondary deans and directors on the articulation process
- Follow-up training for the applied academic instruction (contextual methodologies) instructors
- Guidance counselors for implementation of career centers and the career/educational plans
- High school teams on integration of academic and vocational skills and the *High Schools That Work* concept

Professional development will be provided for:

- Community/junior college personnel on SREB goals and site development planning process - February 9-10, 1994
- Local personnel on administration of the NAEP
- Applied academic instruction (contextual methodologies) teacher trainers
- Teachers for Career, Computer, and Technology Discovery courses to be implemented in Fall 1994
- Additional applied academic instruction (contextual methodologies) instructors from pilot sites
- Work-based Learning coordinators
- Follow-up training for existing applied academic instruction (contextual methodologies) instructors
- Integration activities
- Tech Prep Coordinators on facilitation skills, conflict resolution, management of change, and consensus building

1994-95

Professional development will be provided for:

- Teachers for Technology Discovery courses in remaining pilot sites to be implemented in Fall 1995.
- Local personnel to conduct evaluation/assessment of the Mississippi Tech Prep Initiative
- Community/junior college personnel on career/assessment/placement centers
- Community/junior college personnel on applied academics instruction for math, science, and communications
- Additional follow-up on all components of continuing Tech Prep related activities and programs

1995-96

Professional development will be provided for:

- Local personnel to administer the NAEP
- Additional follow-up on all components of continuing Tech Prep related activities and programs

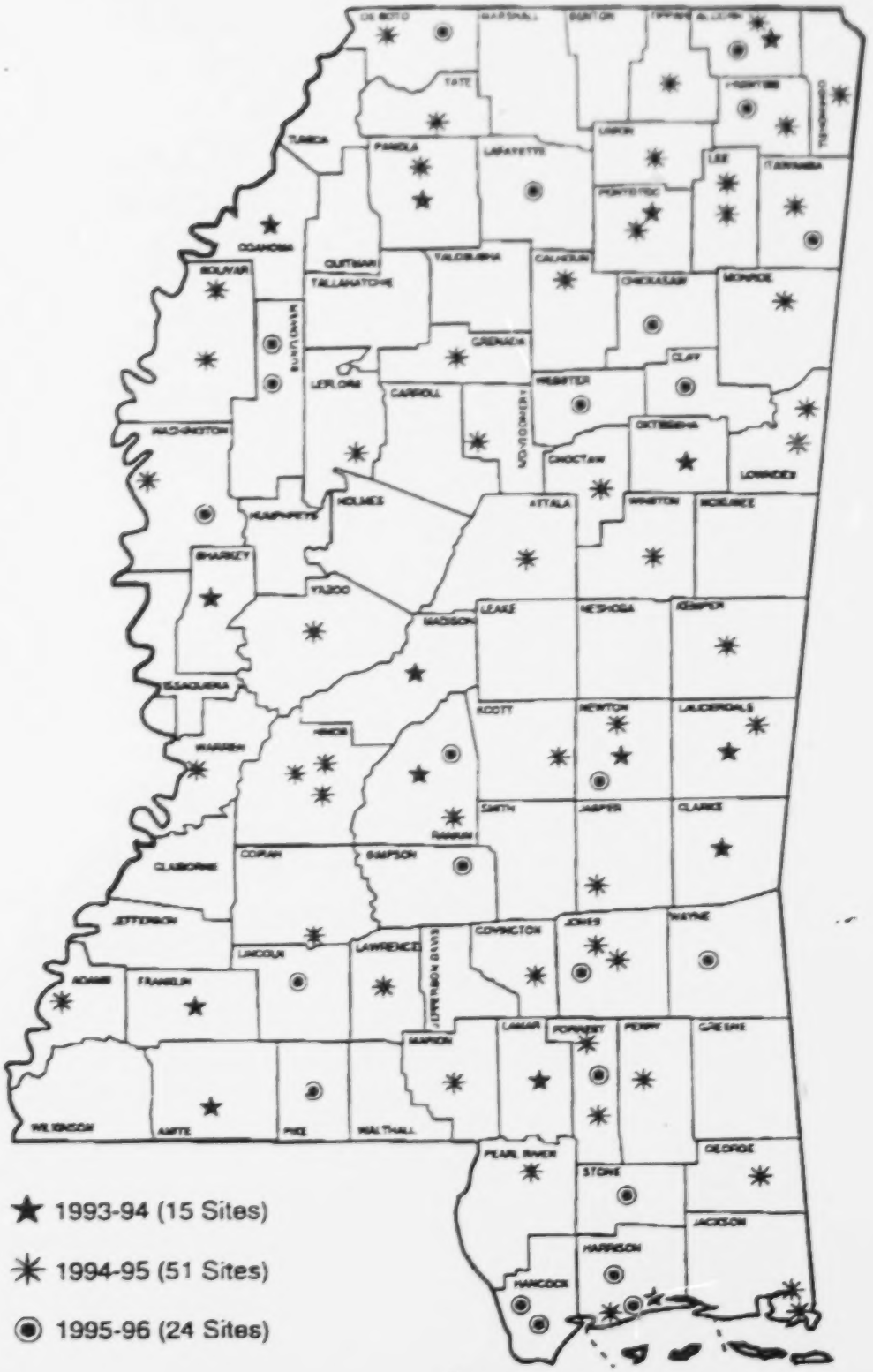
1996-97

Professional development will be provided for:

- Additional follow-up on all components of continuing Tech Prep related activities and programs

Mississippi Tech Prep Sites

April 21, 1995



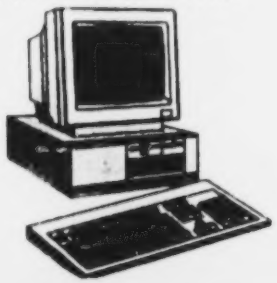
TECH PREP DISCOVERY COURSES

COMMON ELEMENTS IN EACH COURSE

- Focus on the four occupational clusters of the Tech Prep Initiative
  - Agriculture and Natural Resources
  - Business and Marketing
  - Engineering and Industrial
  - Health and Human Services
- Be for ALL students
- Allow students to make wise and meaningful occupational and educational choices for their future

COMMON STRANDS IN EACH COURSE

- Career Exploration and Career/Educational Planning
- Application of Technology
- Problem Solving and Decision Making
- Human Relations and Teamwork
- Integration of Academic Skills
- School to Work Transition



CAREER DISCOVERY (7TH GRADE)

Description

- Uses activities to explore selected careers in each of the four cluster areas
- Promotes self-awareness, career exploration, and educational planning
- Makes students aware of career opportunities and transferable skills among clusters

Major Goals of Career Discovery

- To introduce basic concepts related to careers and career planning
- To develop basic understanding of aptitudes, interests, and abilities
- To develop basic competencies related to problem solving, human relations, and other core career skills
- To explore careers in selected areas through hands-on activities
- To develop a tentative career/educational plan

COMPUTER DISCOVERY (8TH GRADE)

Description

- Uses an innovative multi-media environment
- Provides fundamental skills in microcomputer operation including
  - Keyboarding
  - DOS and File Management
  - Word Processing
  - Spreadsheet
  - Database
  - Telecommunications
  - Desktop Publishing
- Expands student competencies related to human relations, problem solving, careers, and educational planning

Major Goals of Computer Discovery

- To develop basic competency in the use of the alphabetic keyboard by touch
- To develop basic understanding of DOS and file management procedures
- To develop fundamental competencies in using word processing, databases, spreadsheet, telecommunications, and desktop publishing software
- To develop an understanding of how computers are used in occupations in the career clusters

BEST COPY AVAILABLE

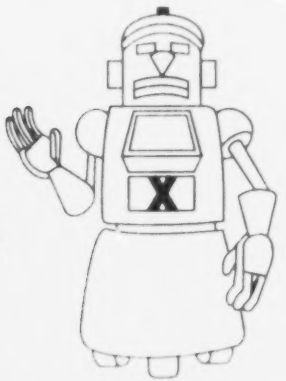
TECHNOLOGY DISCOVERY (9TH GRADE)

Description

- Uses the modular instructional approach which allows students to work in teams
- Provides students with fundamental knowledge about technology and its applications

Major Goals of Technology Discovery

- To identify technological resources and apply them within the four occupational clusters
- To use technological processes to solve problems within the four cluster areas
- To apply teamwork, positive self-concept, and leadership skills
- To apply and transfer knowledge and skills regarding diverse technological systems



For more information about
Tech Prep Discovery Courses
contact:

State Tech Prep Coordinator
Mississippi Department of Education
P.O. Box 771
Jackson, MS 39205

(601) 359-3986

or

Your Local Community College
Tech Prep Coordinator

The state of Mississippi is an equal opportunity employer and does not discriminate on the basis of race, color, national origin, sex, disability, and/or age.

Mississippi
TECH PREP
"A Path to Tomorrow"

DISCOVERY COURSES

Mississippi Department of Education
Office of Vocational and Technical Education

Mississippi's Tech Prep initiative provides students with the skills and competencies needed in the workplace today and tomorrow. It is a concentrated, coordinated approach to lifelong learning and earning. Through this unique program, Mississippi students can be a part of a workforce that will ensure the state's ability to thrive in the future. This will further ensure the advancement and success of the student.

How does the student benefit?

Becomes self-sufficient

Increases competence

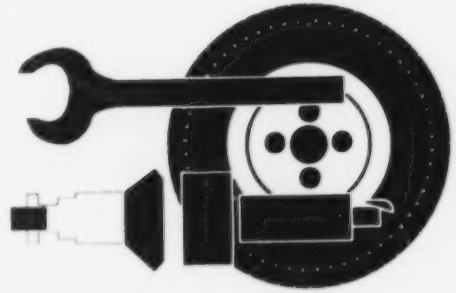
Develops the confidence needed to cope in a fast-paced world

Acquires more marketable job skills, leading to higher paying jobs

Tech Prep is

- preparation for a lifetime of learning that meets employer demands and allows career advancement
- a total cooperative and connected community effort, with businesses, parents, students, secondary schools, and community/junior colleges
- a course of study, combining secondary and postsecondary education, and paralleling college prep
- a merging of academic and vocational and technical competencies
- a technologically appropriate sequence of courses related to an individual's career
- an avenue to successful employment, with multiple exit points (to work, to an associate degree, and to further advanced education)
- an increased expectation of a brighter future for all students.

Mississippi
TECH PREP
"A Path to Tomorrow"



New jobs are being created every day. In Mississippi, as in every other state in the nation, the success of new and expanding businesses depends on a technically sophisticated workforce. Due to rapid advancements in technology, global economic competition, and dramatic changes in the workplace todays employers require workers who:

- can solve technical problems
- can work effectively with others
- can integrate and communicate information

How does the community benefit?

Technologically advanced workforce

Productive employees

Increased number of high school graduate

Increased number of skilled community college graduates

Self-reliant graduates

BEST COPY AVAILABLE

Tech Prep provides an educational path that leads to tomorrow. It integrates college prep coursework with vocational and technical applications. A technical education concentration is included. This planned sequence of courses begins in junior high school and is articulated to the community college, leading to an associate of applied science degree. Students can also pursue a four-year baccalaureate degree, if so desired.

Discovery courses are offered for students in grades 7 through 9--Career Discovery (7th grade), Computer Discovery (8th grade), and Technology Discovery (9th grade). These courses provide a basis for implementing applied academic instructional methods in mathematics, science, and communications and for integrating academic skills and vocational skills.

Courses at the high school level are articulated with both vocational-technical courses and academic courses at the community/junior college level, and programs have been implemented to provide school-to-work transition skills.

A comprehensive career guidance program is a major component of Tech Prep to ensure each student is provided with appropriate educational opportunities. Students in grades 7 through 12 have access to Career Guidance centers. Counselors/teacher-advisors assist students in planning their education through the use of a career/educational plan portfolio. Each student's portfolio documents his/her education and work experiences, provides a written record of interests and an annual self-evaluation, and helps the student relate his/her education to career interests and aptitudes. Counseling continues through the community/junior college.

For more information about
Tech Prep contact:

State Tech Prep Coordinator
Mississippi Department of Education
P.O. Box 771
Jackson, MS 39205

(601) 359-3986

or

Your Local Community College
Tech Prep Coordinator

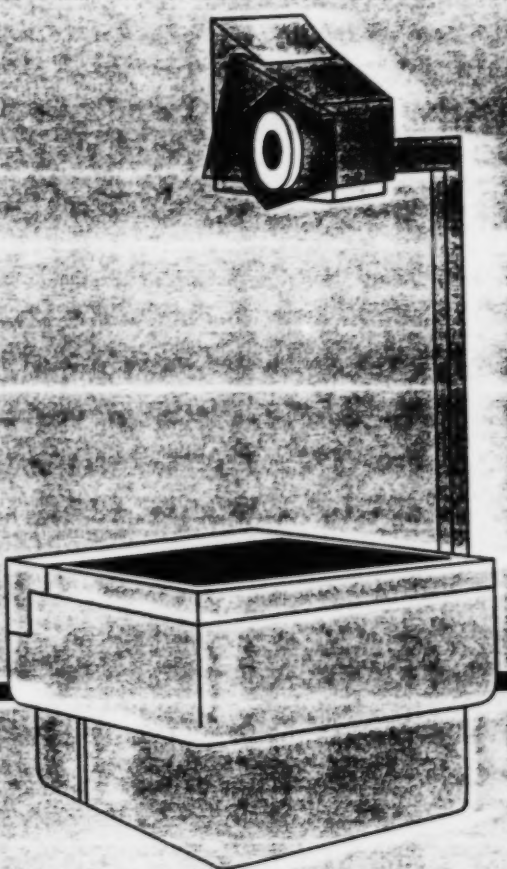
Mississippi
TECH PREP
"A Path to Tomorrow"

State Department of Education
Office of Vocational and Technical Education

The State of Mississippi is an equal opportunity employer and does not discriminate on the basis of race, color, national origin, sex, disability, and/or age.

BEST COPY AVAILABLE

Articulation Information



BEST COPY AVAILABLE

ARTICULATION

Purpose

The purpose of the articulation component of the Tech Prep Initiative is to provide linkages between two or more educational systems which assist **ALL** students in making a smooth transition from one level to another without experiencing delays, duplication of coursework, or loss of credit.

Overview

The articulation component of Tech Prep focuses on creating a smooth transition from the secondary school to a postsecondary setting or the work force. This component involves identification of articulation linkage points, establishment of action teams to link secondary and postsecondary components of the total Tech Prep program, and the creation of sequential courses of study for all students enrolled in the Initiative programs.

Goals and Objectives

- To identify programs/courses which should be articulated and the participants who need to be involved;
- To articulate high school and community/junior college (C/JC) vocational-technical and academic programs/courses; and
- To identify career clusters and develop sequential courses of study for each cluster which prepare students for technical career opportunities.

Outcomes

- Coordination of instructional content between secondary and postsecondary courses
- Recommendations for advanced placement for vocational-technical and academic courses
- Sequential courses of high school study which better prepare students for postsecondary program majors.

Procedures

Activity	Steps	Responsibilities	Timelines	Funding/Source	Resources
1. Develop cooperative articulation agreement	a. Disseminate sample articulation agreement to responsible parties. (See Sample Articulation Agreement.) b. Negotiate agreement with responsible parties. c. Obtain signatures for implementation. (Note: An articulation agreement is an on-going agreement between an individual school district and a community/junior college. Once signed, the articulation agreement remains in effect until revoked or revised.	Superintendents H.S. Principals Vocational Directors C/JC President Vocational Dean/Director Academic Dean Tech Prep Coordinator	Phase I Schools Aug. 3- Sept. 9, 1994 Phase II Schools - Oct. 21-Nov. 18, 1994	Tech Prep Project (travel funds)	Sample Articulation Agreement
2. Identify programs/ courses (academic and vocational) to be articulated and personnel involved	a. Conduct an inventory of high school and C/JC vocational-technical courses and programs - including postsecondary academic courses required for vocational-technical students. b. Identify related courses/programs: (1) secondary and postsecondary vocational-technical areas, and (2) secondary and postsecondary academic areas. c. Develop a schedule which identifies programs/courses to be articulated in 1994-95 and 1995-96 (if necessary). It is recommended that a minimum of 4 vocational-technical programs and 2 academic core courses be articulated each year until all identified programs/courses have been completed. d. Identify personnel for each program/course articulation action team.	Tech Prep Coordinator Secondary Vocational Director High School Principal(s) C/JC Academic Dean C/JC Vocational Dean(s)	Phase I Schools Sept. 6-Sept. 30, 1994 Phase II Schools - Nov. 21-Dec. 16, 1994	Tech Prep Project (travel funds)	Bulletin 171 High School Handbook C/JC Catalog "Mississippi Vocational-Technical Education Program Cluster Areas" (Attachment III-B)

BEST COPY AVAILABLE

Activity	Steps	Responsibilities	Timelines	Funding/Source	Resources
3. Conduct articulation team meetings for related program/course areas.	a. Conduct an orientation and planning meeting for all articulation teams involved in 1994-95 articulation process. b. Conduct working meeting(s) of each vocational-technical articulation team to: (1) Review competencies/objectives for each program/course and note commonalities and discrepancies (duplications, gaps, and overlaps). (2) Identify adjustments needed to improve articulation and coordination of courses/programs. (3) Make recommendations for Advanced Technical Placement (vocational-technical programs) or Advanced Academic Placement (academic courses). (4) Prepare summary report for review and approval by secondary and postsecondary administration. (5) If advanced placement is recommended, prepare advanced placement report for review and approval. c. Implement approved recommendations in the school year following their approval. d. Conduct formal review of agreements and curricula annually after implementation. Revise/adjust as necessary. Extend existing agreements to other schools as necessary.	Tech Prep Coordinator Articulation Teams HS Principal/ Director C/JC Vo-Tech Dean	Phase I Schools Oct. 3-Dec. 15, 1994 Phase II Schools Jan. 3- March 17, 1995	Tech Prep Project (travel funds)	Articulation Team Summary Report Advanced Placement Agreement

BEST COPY AVAILABL

Activity	Steps	Responsibilities	Timelines	Funding/Source	Resources
4 Develop a sequential course of study for cluster areas	a Identify local career cluster areas. State-wide cluster areas are: (1) Agriculture and Natural Resources Technology (2) Business/Marketing Technology (3) Health and Human Services Technology (4) Engineering/Industrial Technology b Select action team members for each career cluster area, to include: (1) High school academic teacher(s) - mathematics, science, English (2) High school counselors - general and vocational (3) High school vocational teachers (from cluster area) (4) C/JC academic teachers - mathematics, science, English (5) C/JC counselors - general and vocational (6) C/JC vocational-technical teachers (from cluster area) c Have postsecondary technical teachers identify academic and secondary voc/technical skills needed to be successful in C/JC programs. d Have secondary academic and vocational-technical teachers identify where these skills are taught.	Tech Prep Coordinator High School Principal Secondary Vocational Director C/JC Academic Dean C/JC Vocational Dean	Upon completion of all articulation efforts	Tech Prep Project (travel funds)	Bulletin 171 Recommended Sequential Course of Study Recommended Sequential Courses of Study for Tech Prep Programs
	e Have action team members identify a sequential course of study of academic and vocational high school courses which meets high school graduation requirements, and prepares a student for further technical training or for entry-level employment. f Identify C/JC programs which apply to each sequential course of study.				

BEST COPY AVAILABLE

Example

Cooperative Articulation Agreement

between

_____Community/Junior College

and

_____School District

I. The consortium leadership agrees to:

A. Identify articulation (linkage) points between secondary and postsecondary vocational-technical programs and academic courses in the consortium.
B. Identify consortium articulation action teams for vocational-technical programs and academic courses ensuring that needs of special populations have been assessed and considered in order to identify support services.
C. Identify instruments and processes for articulation.
D. Establish a process for secondary student visitation to the articulated postsecondary programs.
E. Identify target dates/timelines.
F. Conduct an annual evaluation of the Tech Prep Initiative.
G. Provide assurances that students in the special populations groups have full and complete access to programs in the Tech Prep Initiative by identifying and removing any barriers that may restrict access, assessing the needs of these students and providing support services to meet these needs, and continually monitoring the progress of these students to determine if their needs are being met.

II. The community/junior college agrees to:

A. Develop and disseminate, in cooperation with the secondary schools, materials which describe the Tech Prep program and its sequential courses of study.
B. Develop, in cooperation with the secondary schools, a sequential course of study including recommended academic and vocational courses for students pursuing an identified career path.
C. Establish procedures and policies for granting postsecondary credit for secondary vocational competencies.

D. Require academic and vocational-technical teachers and counselors to attend articulation meetings.
E. Host and coordinate orientation meetings and visits for secondary Tech Prep students.
F. Provide special incentives to students who complete the secondary Tech Prep program.
G. Participate in an annual evaluation of the Tech Prep Initiative in cooperation with the secondary schools.

III. The secondary school system agrees to:

A. Cooperate with the community college in developing and disseminating materials which describe the Tech Prep Initiative and its sequential courses of study.
B. Cooperate with the community college in developing a sequential course of study for students pursuing career clusters which include vocational-technical and academic courses.
C. Require academic and vocational-technical teachers and counselors to attend articulation meetings.
D. Allow Tech Prep students to attend orientation sessions and visits on the community college campus.
E. Provide assurances that students from the special population groups have been integrated into programs in the Tech Prep Initiative.
F. Participate in an annual evaluation of the Tech Prep Initiative in cooperation with the community college.

_____	_____
President	Superintendent
_____	_____
Community/Junior College	School District
_____	_____
Date	Date

Mississippi Vocational-Technical Education
Program Cluster Areas

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
Agriculture/Natural Resources Technology	Agriculture Business and Management	Agribusiness Management Technology Field Crops Technology Animal Husbandry Technology	
	Agriculture Production		Agribusiness Management Technology Field Crops Technology Animal Husbandry Technology Agriculture Mechanics Technology
	Agriscience		Agribusiness Management Technology Field Crops Technology Animal Husbandry Technology Aquaculture Technology
	Agriculture Mechanics	Agriculture Mechanics Technology	Heavy Equipment Maintenance Technology
	Horticulture	Horticulture Technology Landscape Management Technology	
	Forestry	Forest Technology	
Agriculture/Natural Resources Technology (cont.)	Agriculture Products & Processing		Meat Merchandising

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
Business/Marketing Technology	Business & Computer Technology (Intensive Business Training and Business Computer Applications)	Administrative Support Technology Accounting Technology Legal Office Technology Medical Office Technology Computer Programming Tech. Court Reporting Tech. Paralegal Technology	
	Business & Office Co-Op		
	Marketing and Retailing	Fashion Merchandising Marketing Management Technology	
	Hotel and Motel Management		Hotel and Motel Management Travel and Tourism
	Marketing Co-Op		
	Diversified Co-Op		
	Computer Programming		Computer Programming Tech.
Health and Human Services Technology	Health Cluster	Medical Assisting Tech. Medical Laboratory Tech. Medical Records Tech. Practical Nursing Radiograph (Med.) Technology Respiratory Care Technology Surgical Technology	Veterinarian Assisting Technology Dental Assisting Technology Dental Hygiene Technology Emer. Med. Technician (A&P)
	Child Care & Guidance Services	Child Development Technology	Teacher Assistant

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
	Food Production, Management & Services	Food Production & Management Technology Culinary Arts Technology	
	Clothing/Apparel/Textiles	Clothing & Textiles Services	
	Cosmetology		
	Companion to the Aged		
Engineering/Industrial Technology	Automotive Mechanics	Automotive Mechanics Technology Automotive Machinist	Heavy Equipment Maintenance Technology
	Automotive Body Repair	Automotive Body Repair Technology	
	Vehicle and Mobile Equipment Repair	Heavy Equipment Repair Technology (Diesel Engine Mechanics)	Agriculture Mechanics Technology
Engineering/Industrial Technology (cont)	Metal Trades	Welding Machine Tool Operation/Machine Shop Technology Sheet Metal Tool and Die Making Technology	
	Graphic and Print Communications	Graphic and Print Communications Technology	

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
	Heating and Air Conditioning	Heating and Air Conditioning Technology	
	Marine Engine Mechanics	Marine Engine Mechanics	
	Small Engine Repair		Marine Engine Mechanics
	Brick, Block & Stonemasonry		Brick, Block, & Stonemasonry
	Carpentry		Carpentry
	Electrician	Electrical Technology	
	Building Trades	Brick, Block and Stonemasonry Carpentry	
	Diesel Engine Mechanics		Heavy Equipment Repair Technology
	Plumbing		Plumbing
	Pipefitter/Steamfitter		Pipefitting
Engineering/Industrial Technology (cont.)	Upholstered Furniture Manufacturing	Automated Furniture Manufacturing Technology	
	Machine Tool Operation/Machine Shop		Machine Tool Operation/Machine Shop Technology Tool and Die Making Technology
	Welding, Brazing and Soldering		Welding

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
	Industrial Maintenance	Industrial Maintenance Trades	
	Diversified Technology		Automated Manufacturing Technology Automated Furniture Manufacturing Technology Instrumentation Technology Robotics Technology Telecommunication Technology Drafting and Design Technology Electronic Technology Laser Electro-Optic Technology Electrical Technology Computer Servicing Technology
Engineering/Industrial Technology (cont.)	Electronics	Electronics Technology Instrumentation Technology Robotics Technology Communications Electronics Repair Technology Computer Servicing Technology Laser/Electro-Optic Technology Telecommunications Technology	

Program Cluster Area	Secondary Programs	Articulated Postsecondary Programs	Related Postsecondary Programs
	General Drafting	General Drafting and Design Technology Industrial Drafting Technology Architectural Drafting Civil Technology	

The following postsecondary programs do not have directly articulated or related secondary programs at this time:

Cotton Gin Management Technology
Funeral Services Technology
Optical Technology
Banking and Finance Technology
Automotive Vehicles and Accessories
Barbering
Commercial Art Technology
Commercial Truck Driving
Cosmetology
Watch Repair
Well Drilling Construction
Construction Equipment Operation

Example

Articulation Team Summary Report

(Note: The following is intended to serve as the format for a summary report of the articulation activities for each vocational program or academic course. This form may be prepared using any word processing package. A copy of this form should be submitted to the State Tech Prep Coordinator and kept on file in the Consortium Tech Prep office. All type in italics represents instructions to the Articulation Teams.)

Name of Program/Course: *(List the name of the vocational-technical program or the academic course that was articulated as a result of this effort.)*

Participating Community/Junior College: *List the name of the participating community/junior college. If this activity related only to one campus/center of the college, list that campus/center.)*

Participating Secondary School: *List the name of the participating secondary school/vocational center. If more than one school or district is involved in this process, list the names of the other participants.*

Articulation Team Members: *List the names and titles of all members of the articulation team. Indicate which member(s) served as officers.*

Team Meetings (Date, Location, Actions Taken); *Record the date, location, and actions taken for each articulation team meeting.*

Findings:

Commonalities: *Summarize the major commonalities that exist between the secondary and postsecondary program/course.*

Discrepancies (Gaps, Overlaps, and Duplications): *Summarize the major discrepancies that were found by the articulation team between the secondary and postsecondary program/course.*

Other Findings and Concerns: *List any other findings and concerns that were discovered during the team meetings. (Example - need for additional equipment, teacher training, supplies and instructional resources, etc.)*

Adjustments: *Summarize the adjustments that are recommended to better articulate the secondary and postsecondary program/course.*

Example

Recommendations for Advanced Technical Placement and Advanced Academic Placement: (*List specific recommendations for issuing advanced technical credit for postsecondary vocational-technical courses or advanced placement credit for academic courses. Include recommendations for verification of high school competency.*)

_____ _____

Chairperson, Articulation Team Tech Prep Coordinator

Approval

_____ _____Secondary

Building Administrator (Principal/Director) Community/Junior College Center/Campus Dean/Director

Example

Advanced Placement Agreement

CC/JC Division:_____ _____

Program:_____

Students may receive advanced placement in the above named program area for the following community/junior college course(s):

Course No(s).	Course Name(s)	Credits

Specific criteria to be met in order to receive advanced placement credit for each community/junior college course:

The following college course(s) will be articulated:

Course No(s).	Course Name(s)	Credits

College credit for the course(s) articulated will be awarded after the successful completion of ____ college units in the program area.

CC/JC Department Chairperson_____ Date:_____

CC/JC Dean _____ Date:_____

CC/JC President_____ Date:_____

High School Dept. Chairperson_____ Date:_____

Principal/Vocational Director_____ Date:_____

School District Superintendent_____ Date: _____

EXAMPLE

Recommended Sequential Course of Study

(For Students Entering 9th Grade in 1995-96 and Graduating in 1999)

Secondary School: **Southwest High School**

Career Cluster: **Health Cluster**

Area	Credit	9th Grade	10th Grade	11th Grade	12th Grade	C/JC Years 1 & 2
English	4	English I	English II	English III	English IV	Upon completion of the approved high school curriculum, students can pursue either a two-year or four-year college program of study.
Math	3	Algebra I	Geometry	Algebra II		
Science	4	Biology I	Biology II	Chemistry	Human Anatomy and Physiology	
Social Studies	3½	Mississippi Studies	World History	U.S. History from 1877	U. S. Government	
Health	½		Comprehensive Health			
Computer Applic-ations	½	Computer Applications*				
The Arts	1		Art Elective			
Technical Core	5	Technology Discovery		Health Cluster I	Health Cluster II	**See list on following page.
TOTAL CREDITS EARNED	21 1/2	5 1/2	5 1/2	6	4 1/2	

* Evidence of proficiency in computer application is accepted in lieu of 1/2 unit.

ARTICULATION OF ACADEMIC COURSES

- Identify Academic Courses for Articulation
- Identify Articulation Team Members
- Develop Goals and Outcomes to be Accomplished
- Develop Schedule of Activities
- Develop Competency Profile for Secondary-Postsecondary Courses
- Assemble Articulation Team
- Develop Summary Report
- Present Articulation Summary Report to Consortium Executive Committee
- Plan for Evaluation and Revision

Note Pages

BEST COPY AVAILABLE

HOW MANY WAYS CAN YOU SPELL ARTICULATION

Charlotte Darnell
Ellen Shaw

Articulation is the process which allows the linkage of two or more educational institutions in order to provide a smooth transition for student progressing from one level to the next without delays, duplication or loss of credit

CHARACTERISTICS OF EFFECTIVE ARTICULATION

1. As a process
   - it is the coordination of policies and practices between educational systems to produce a smooth flow of students from one another
2. As an attitude
   - it is the willingness of educators in all sectors to jointly promote and enhance the development of student centred programs
3. As a goal
   - it is the creation of an educational system without artificial divisions, so that a students whole educational experience becomes one unbroken flow

BEST COPY AVAILABLE

GOALS AND OBJECTIVES

1. To identify programs/courses which should be articulated and the participants who need to be involved.
2. To articulate high school and community/junior college vocational, technical and academic programs/courses.
3. To identify career clusters and develop sequential courses of study for each cluster which prepares students for technical career opportunities.

OUTCOMES

1. Coordination of instructional content between secondary and post-secondary courses.
2. Recommendations for advanced placement/credit for vocational, technical and academic courses.
3. Sequential courses of high school which better prepare students for post-secondary program majors.

THE TEN PRINCIPLES OF ARTICULATION

- Leadership and Commitment
- Early Faculty Involvement
- Respect and Trust
- Mutual Benefits to all Parties
- Written Articulation
- Open Clear and Frequent Communication
- Modest Initial Goals
- Accountability
- Competency-Based Curricula
- Common Focus on Mutual Goals Rather Than on Individual Turf

STEPS IN THE ARTICULATION PROCESS

1. Sign an articulation cooperative agreement
2. Identify programs/courses which should be articulated and who should be involved
3. Articulate academic, vocational and technical programs/courses
4. Develop a sequential course of study for each cluster
5. Implement the process
6. Review the process annually

Articulation Team Summary Report

Name of Program/Course:
Drafting and Design technology
Participating Community/Junior College:
East Mississippi Community College
Participating Secondary School:
Millsaps Vocational Center
Articulation Team Members:
Ernest Lowmaster, Drafting Instructor
East MS Community College
Bobby Hines, Drafting Instructor
East MS Community College
Hardy Teagle, Drafting Instructor
Millsaps Vocational Center
Team Meetings:
September 15, 1993 Meridian Campus
Planning Meeting
November 18, 1993 Meridian Campus
Articulation Meeting

Findings:
Commonalities:
- There were 35 standard competencies

Discrepancies:
- The team found that lettering techniques were required at the secondary level and should not be repeated at the community college level

Other Findings and Concerns: none

Adjustments: None

Recommendations for Advanced Technical Placement and Advanced Academic Placement:
- The team recommended that a student will be given 3 semester hours of advance placement credit for DDT 1013, Essential Lettering upon demonstration of proper lettering techniques with 80% accuracy

Chairperson, Articulation Team _____ Task Prep. coordinator _____
Approved:

Secondary Building Administrator _____ Community/Junior College _____
Principal/Director _____ Chief Academic Officer _____

ARTICULATION OF ACADEMIC COURSES

- Identify Academic Courses for Articulation
- Identify Articulation Team Members
- Develop Goals and Outcomes to be Accomplished
- Develop Schedule of Activities

- Develop Competency Profile for Secondary-Postsecondary Courses
- Assemble Articulation Team
- Develop Summary Report
- Present Articulation Summary Report to Consortium Executive Committee
- Plan for Evaluation and Revision

Miscellaneous Information

BEST COPY AVAILABLE

GENERAL QUESTIONS TO BE ASKED IN PLANNING A PROGRAM FOR ARTICULATION

MISSION AND GOALS FOR ARTICULATION

1. What are the reasons secondary/postsecondary articulation is being considered?

   - TRANSITION Improve transition between secondary and postsecondary training
   - ENCOURAGE POSTSECONDARY TRAINING Encourage secondary students to continue their training after high school
   - HEADSTART FOR SECONDARY STUDENTS
   - DECREASE DROPOUT RATES Encourage secondary students to complete their high school diploma
   - BETTER SKILLS ON ENTRANCE Improve preparation of students entering postsecondary institutions
   - FACULTY COOPERATION Increase ties between secondary and postsecondary faculty
   - DUPLICATION Reduce duplication of effort in secondary and postsecondary institutions
   - STUDENT RETENTION
   - IMPROVE OCCUPATIONAL PROGRAMS AND REDUCE PROGRAM COSTS
   - OTHER _____

     _____

2. What is the mission of the articulation effort? Should a mission statement be developed for the proposed articulation program?

3. How does your mission and definition of articulation fit with the mission, goals, and objectives of local secondary and postsecondary institutions?

4. What obstacles can be anticipated in planning and developing articulated programs?

   - Funding for development of articulated programs
   - Funding for maintenance of articulated programs
   - Turf issues
   - Wait and see attitude on the part of postsecondary staff and administration
   - Wait and see attitude on the part of secondary staff and administration
   - Limited relationships between secondary and postsecondary administration
   - Limited relationships between secondary and postsecondary staff
   - Other _____ _____

     _____

5. Who will be involved in planning the overall articulation effort?

- School district administrators
- Secondary school administrators
- Secondary vocational teachers
- Secondary academic teachers
- Secondary counselors
- Postsecondary administrators
- Postsecondary vocational department administrators
- Postsecondary vocational teachers
- Postsecondary academic teachers
- Vocational advisory committee members
- Business and industry representatives
- Representatives of labor
- Other _____

_____

6. Who will be involved in planning the implementation of articulation for the specific areas to be articulated?

- School district administrators
- Secondary school administrators
- Secondary vocational teachers
- Secondary academic teachers
- Secondary counselors
- Postsecondary administrators
- Postsecondary vocational department administrators
- Postsecondary vocational teachers
- Postsecondary academic teachers
- Postsecondary counselors
- Vocational advisory committee members
- Business and industry representatives
- Representatives of labor
- Other _____

_____

7. Who will supervise the planning and implementation of the articulation project?

- A representative from the postsecondary institution
- A representative from a local school district
- A representative from a local educational service district
- The regional vocational education coordinator
- A person hired by the local agencies to supervise the articulation program

- A steering committee made up of representatives for local secondary and postsecondary institutions
- Other _____

_____

TIMELINESS FOR ARTICULATION

8. What timeliness will be used for making basic decisions and planning the articulation program?

9. What timeliness will be used for the implementation of the articulation program?

10. How will the articulation program be implemented?

    - In all secondary and postsecondary schools in a single vocational area to test the program, and then in other vocational areas
    - In a specific postsecondary vocational department and a few secondary schools to test the program before implementation on a broader scale
    - Phase in the process in a series of vocational areas based on a gradual plan for implementation
    - Only in areas where secondary and postsecondary teacher interest in articulation is high
    - In all identified programs on a specific implementation date
    - Other _____

    _____

DEFINING THE ARTICULATION EFFORT

11. What programs will be targeted for articulation?

    - Academic programs
    - Vocational programs
    - Vocational and academic programs
    - Other _____

    _____

12. What approach is planned for program articulation?

    - Time Shortened Credit received by secondary students is used toward the total hours required for postsecondary certificate or degree programs

- Skill Enhanced Competencies learned by secondary students eliminate specific course requirements, but do not count toward total hours required for postsecondary certificate or degree programs
- Other _____

_____

13. What modes of articulation will be utilized?

- School to School Articulation agreements between the department of the postsecondary institution and each secondary school based on an individual assessment of the curriculum for each secondary school
- Common Curriculum Carbon copy of postsecondary course curriculum offered at the secondary level for students to receive postsecondary credit
- Challenge Examination Secondary school students tested utilizing postsecondary content examination before students can receive credit
- Competency-Base Competencies taught in postsecondary courses are matched to the competencies accomplished by secondary students
- Combination of the above
- Other _____

_____

14. Will it be appropriate for different modes of articulation to be used for different programs?

- All programs will use the mode of articulation selected
- Programs will be articulated based on the mode that best fits the curriculum area
- Programs will be encouraged to utilize a single mode of articulation, however other modes may be used if appropriate
- Other _____

_____

15. Will it be appropriate for different modes of articulation to be used within the same program?

- A single mode of articulation will be used for all courses within a single program
- Different modes of articulation can be used within a program, based on the mode that best meets the need
- Programs will be encouraged to utilize a single mode of articulation for all courses being articulated, however more than one mode may be used for courses if needed
- Other _____

_____

16. Which of the following would be appropriate as a part of the local program for articulation?

- Reverse articulation Portions of the postsecondary program offered in the secondary school
- Facility sharing
- Faculty sharing
- Television Courses Postsecondary television courses taken by secondary students for credit
- College-High Program Postsecondary courses offered at the secondary level by postsecondary instructor, or certified high school instructor

17. How will articulated credit be transcripted? Credit earned by a secondary student:

- Will be transcripted for a specific postsecondary course with letter grade
- Will be transcripted for a specific postsecondary course with a pass/no pass grade
- Will be transcripted for a specific postsecondary course but with a special designation to indicate "articulated credit"
- Will be transcripted for a block of courses to indicate completion of content but no credit will be provided (skill enhanced)
- Other _____

_____

18. What fee will be charged for the articulated credit to be transcripted?

- No fee charged for articulated credit
- No fee charged if secondary student becomes a full-time or part-time postsecondary student
- No fee charged if secondary student becomes a full-time postsecondary student; fee charged for students entering part-time
- Full postsecondary student fees charged for articulated credit
- Partial postsecondary student fees charged for articulated credit, i.e. credit by examination or credit by assessment fees
- Other _____

_____

19. When will articulated credit earned by the secondary student be transcripted?

- When earned by the secondary student and submitted by secondary instructor
- At the end of each secondary school year
- Upon high school graduation by the secondary student
- Upon high school graduation by the secondary student and entrance to the postsecondary institution

- Upon high school graduation by the student and successful completion of the first term/semester at the postsecondary institution
- Upon completion of the postsecondary program by the student
- Other _____

_____

20. How will the articulation efforts be evaluated?

21. Will there be a follow-up of students that have received credit through the articulation effort? How will the follow-up be accomplished? Who will be responsible for the follow-up?

PROMOTION OF ARTICULATION

22. Will a marketing plan be developed for the articulation program?

23. How will articulation effort be promoted to:

- General public
- Parents of secondary students
- Secondary students
- Secondary faculty
- Secondary counselors
- Postsecondary students
- Postsecondary faculty
- Postsecondary counselors and advisors
- Other _____

_____

24. What types of media will be utilized to promote articulation efforts?

- Generic articulation brochures
- Articulation brochures for each program
- Posters
- Generic audio-visual materials, i.e. video tapes, slide-tape
- Audio-visual materials for each program
- Radio and television advertisement (public service announcements)
- Promotional items (pens, paper clips, balloons)
- Other _____

_____

25. Who will be responsible for the promotional efforts?

ARTICULATION AGREEMENT

26. What type of articulation agreement will be utilized?

- A comprehensive agreement between the postsecondary institution and each school district covering all articulation efforts
- Program agreements between each postsecondary department and each secondary school
- A comprehensive articulation agreement between the postsecondary institution and each school district, as well as agreements for each program area being articulated
- Informal, or no articulation agreements
- Other _____